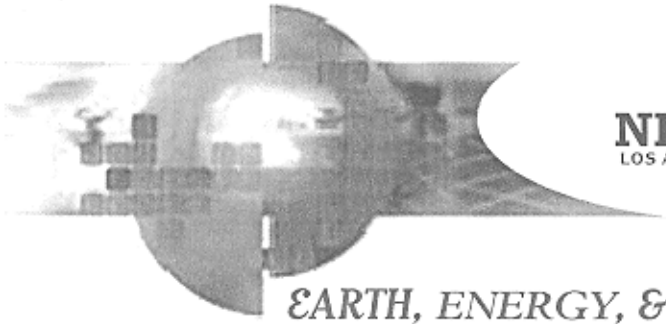


Kim Craft 06-4-3



NECA
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IBEW
LOCAL 11

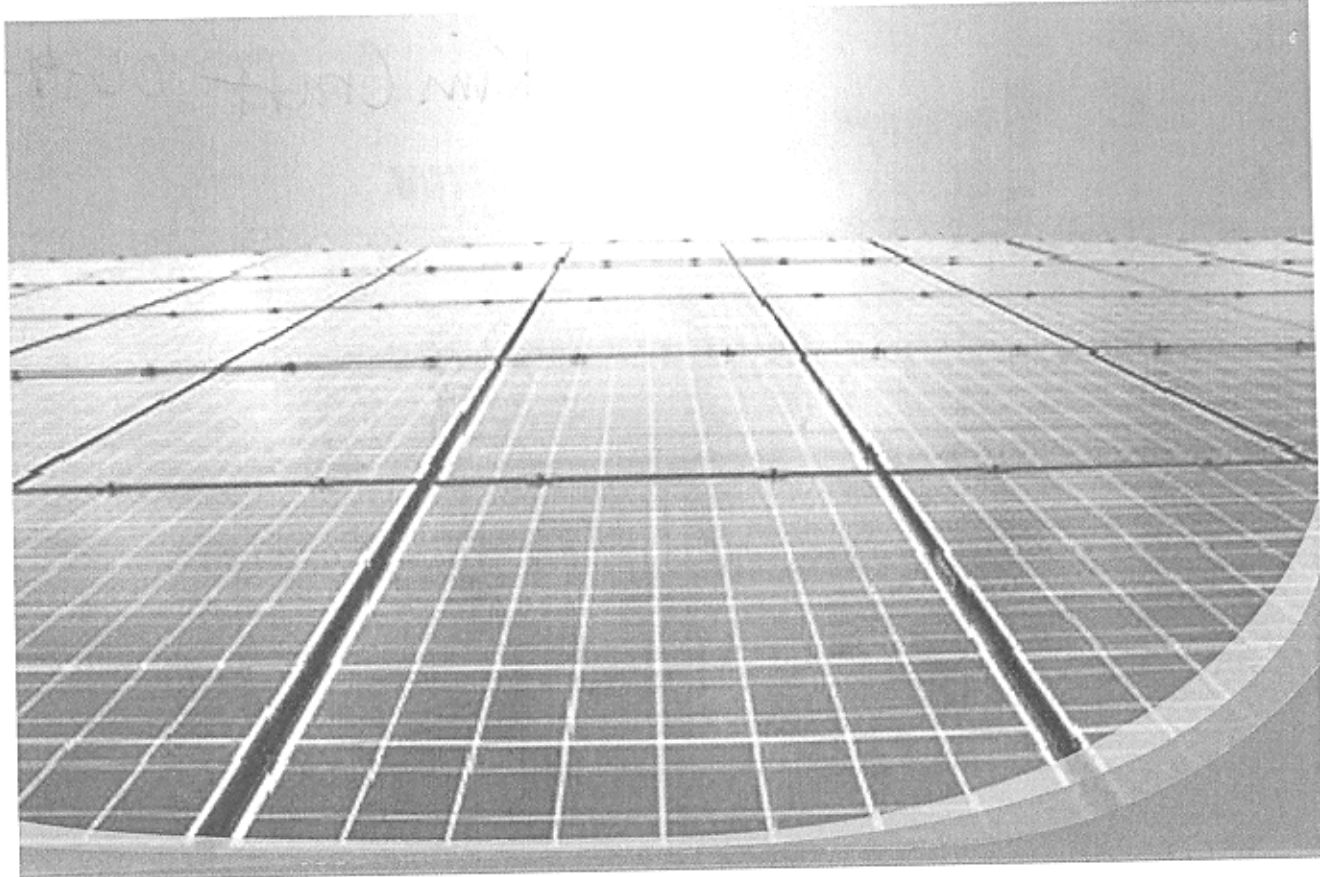


EARTH, ENERGY, & TECHNOLOGY
THE SOLAR SOLUTION

PHOTOVOLTAIC INSTALLATION

BY LOS ANGELES NECA AND
IBEW LOCAL UNION 11





ONE OF THE TEN LARGEST SOLAR-POWER SYSTEMS IN THE U.S.

LA County NECA and IBEW Local Union 11 are committed to leading the way in the use and generation of this renewable resource and vital technology. Together with our premier educational facility, we are working to benefit the electrical industry, our environment, and our nation by installing and maintaining the quality, safe, efficient photovoltaic systems that will help provide the answer for our future.

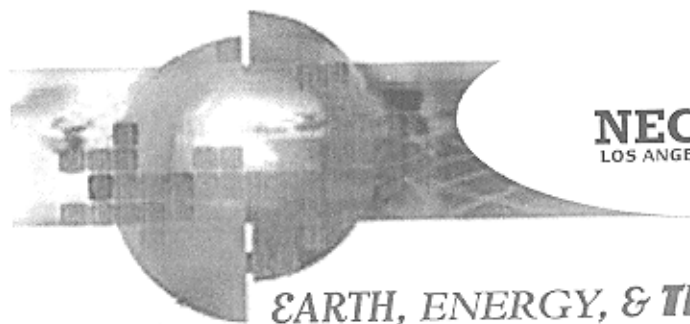
Electrical Training Institute of Southern California

6023 South Garfield Avenue

City of Commerce, California 90040

323/221-5881

www.laett.com

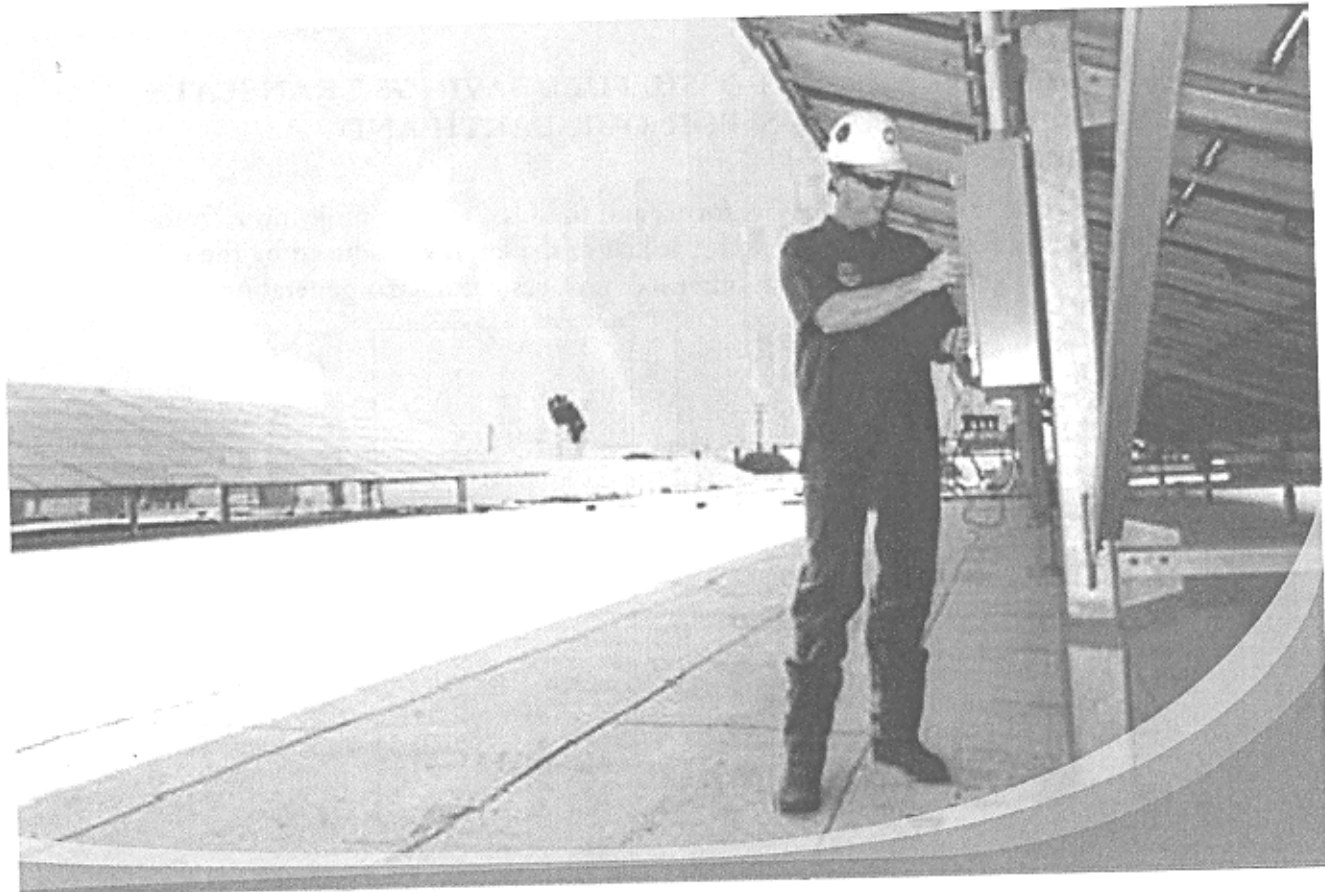


NECA
LOS ANGELES

IBEW
LOCAL 11



EARTH, ENERGY, & TECHNOLOGY
THE SOLAR SOLUTION



SOLAR-GENERATED ELECTRICITY POWERS THE ELECTRICAL TRAINING INSTITUTE OF SOUTHERN CALIFORNIA

**WELCOME TO ONE OF THE LARGEST, PRIVATELY OWNED
SOLAR POWER GENERATING SYSTEMS IN THE WORLD.**

The ETI photovoltaic system was designed and installed by union member contractors and electricians represented by the Los Angeles County Chapter of the National Electrical Contractors Association and the International Brotherhood of Electrical Workers Local Union 11.

Providing 80% of the power for our 144,000-square-foot higher education and advanced technology center, the system is capable of producing 900,000 kilo-watt hours (KWH) of electrical usage per year. This extraordinarily high output replaces the use of fossil fuels, achieving unprecedented fuel savings:

FOSSIL FUELS REPLACED BY THE ETI PV SYSTEM OUTPUT

COAL

0.92 pounds of coal per KWH, or 828,000 pounds, or 8 rail cars full

NATURAL GAS

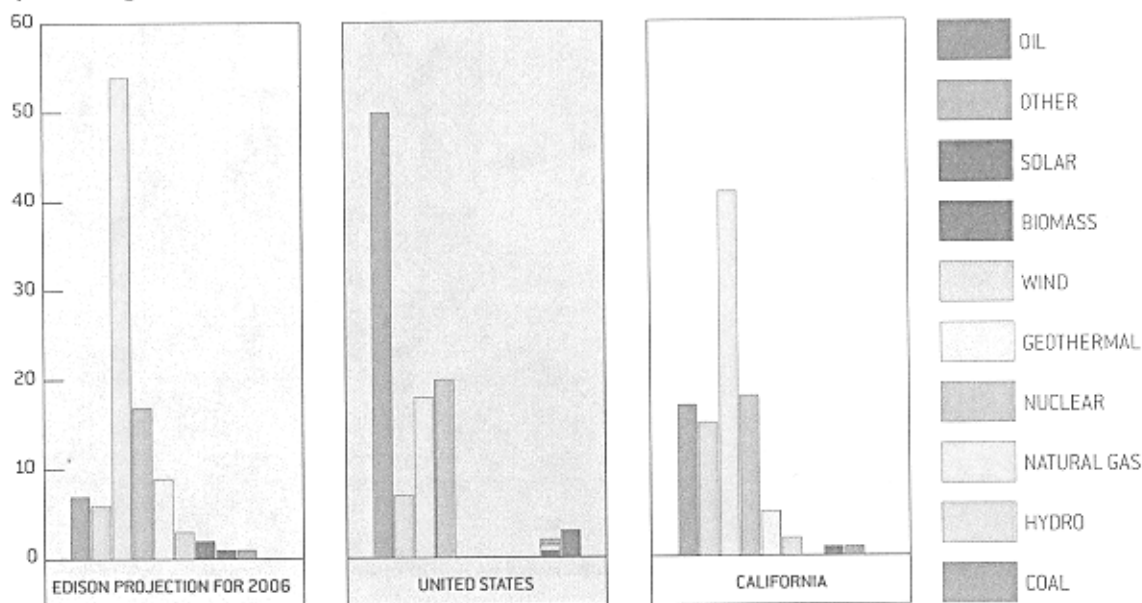
9 cubic feet of natural gas per KWH, or 8,100,000 cubic feet

FUEL OIL

0.11 gallons per KWH, or 99,000 gallons

THESE HIGH AMOUNTS OF FOSSIL FUEL SAVINGS TRANSLATE INTO REDUCED POLLUTION FOR OUR EARTH AND ATMOSPHERE.

Based on the mix of energy usage in California and the U.S., and on projections from Southern California Edison, it is estimated that half of the energy produced by the ETI system replaces coal generation, and the other half replaces natural gas generation.



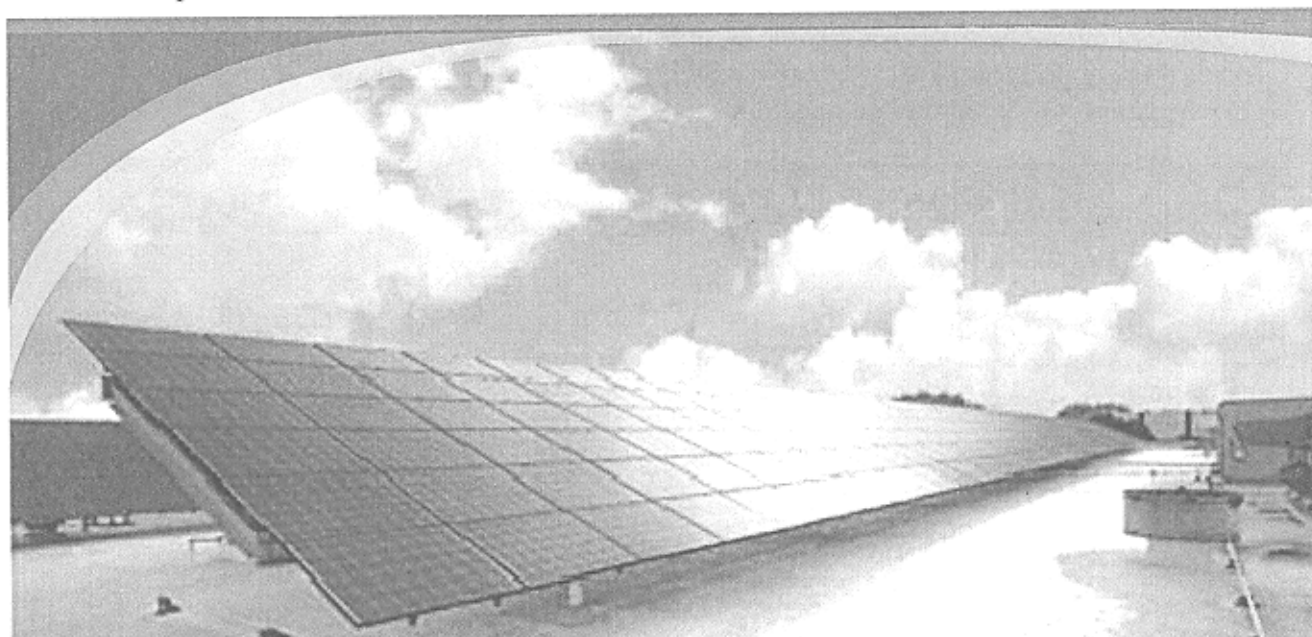
THE RESULT IS A SIGNIFICANT REDUCTION IN POLLUTION. ON AN ANNUAL BASIS, THE ETI SYSTEM REDUCES THE FOLLOWING EMISSIONS:

Sulfur Dioxide by 1,638 pounds

Nitrous Oxides by 3,250 pounds

Carbon Dioxide by 1,540,000 pounds

It is important to note that both sulfur dioxide and nitrous oxides make up acid rain!



PHOTOVOLTAIC SYSTEM INSTALLATION AT THE ELECTRICAL TRAINING INSTITUTE OF SOUTHERN CALIFORNIA

CONSTRUCTED AND IMPLEMENTED BY LA COUNTY NECA AND IBEW LOCAL UNION 11

The Los Angeles County Chapter of the National Electrical Contractors Association (NECA) and the International Brotherhood of Electrical Workers (IBEW) Local Union 11 proudly announce the completion of one of the ten largest privately owned, fully producing solar power generating systems in the United States, installed at the Electrical Training Institute of Southern California (ETI).

The roof-mounted solar panel array generates sufficient power to meet most of the energy needs of the entire training facility, and serves as a hands-on training tool for apprentices, journeyperson electricians, and contractors.



ONE OF THE TEN LARGEST PRIVATELY-OWNED PHOTOVOLTAIC SYSTEMS IN THE U.S.

- The system was designed, built, and installed utilizing all-union contractors and labor.
- It is estimated to be the 100th largest in the world, and one of the ten largest in the U.S. that is owned by a private non-utility organization.

TWO COMPLETE ELECTRICAL SYSTEMS

- Photovoltaic installation comprises two complete electrical systems.
- Together the two systems consist of 2,610 individual solar panels.
- Each solar panel produces 175 DC watts of power.
- System's total DC output rating is 456,750 watts (almost 457-KW).
- The system is capable of providing close to 900,000 kilo-watt hours (KWH) of electrical usage per year.

ROOF-MOUNTED SOLAR PANEL ARRAY

- System is located on the rooftop of the ETI classroom building and its adjacent warehouse.
- Its solar panels are mounted on custom-designed galvanized steel and aluminum frames.
- Each panel slopes at 23 degrees horizontally, measures 18 feet front to back, and is 10 feet in height.
- One array consists of 5 rows of panels and measures 221 feet in length; second array consists of 3 rows and measures 255 feet in length.

ELECTRICITY GENERATED AND MONITORED FOR ETI

- Designed as a grid-interactive photovoltaic system.
- Produces approximately 80% of all the power consumed by ETI and its adjoining IBEW Local Union 11 and Pension Trust offices.
- Provides power to all 144,000 square feet of classroom, lab, and office space throughout the ETI facility.
- Includes display and control rooms that provide system control and data retrieval capabilities.
- Control room includes actual electrical interface with the serving utility, as well as computer displays tracking instantaneous and historical system production and facility consumption data.



EXCELLENT USAGE FOR CONTRACTOR/ELECTRICIAN TRAINING

- Photovoltaic system allows educational interaction for the electrical industry.
- Array and Display Room provide hands-on training for contractors and electricians.
- Skill and proficiency for photovoltaic installation and maintenance by NECA/IBEW contractors and electricians are achieved through training and demonstration on this active system.

ENVIRONMENTALLY-FRIENDLY AND BUSINESS-FRIENDLY POWER GENERATION

- A superb example of cost-efficient energy generation.
- Provides a large scale alternative power source for commercial, industrial, and residential applications.
- Utilizes the viable, renewable source of solar energy.

THE TECHNOLOGY AND APPLICATION OF PHOTOVOLTAICS

- Photovoltaics is the direct conversion of sunlight to electricity through the use of semiconductor material.
- Photovoltaics enables the generation of electrical power through the utilization of energy derived from the sun.
- The photovoltaic process employs solar photovoltaic "PV" cells which are arranged in a photovoltaic system array and are used to deliver energy services to a building.
- Photovoltaic systems can be used in commercial, industrial, and residential buildings.
- LA NECA/IBEW Local Union 11 contractors and electricians are able to install and maintain photovoltaic systems in all types of applications.